OIPE

RAW SEQUENCE LISTING PATENT APPLICATION US/09/525,867 DATE: 04/03/2000

TIME: 11:06:42

Input Set: I525867.RAW

This Raw Listing contains the General Information Section and up to first 5 pages.

PAGE:

```
1
      <110> APPLICANT: YUE, Henry
 2
                                                            ENTERED
            LAL, Preeti
            TANG, Y. Tom
 3
           LU, Dyung Aina M.
 5
           AU-YOUNG, Janice
      <120> TITLE OF INVENTION: MITOCHONDRIAL PROTEINS
 6
 7
      <130> FILE REFERENCE: PF-0678 US
      <140> CURRENT APPLICATION NUMBER: US/09/525,867
 8
 9
     <141> CURRENT FILING DATE: 2000-03-15
     <150> EARLIER APPLICATION NUMBER: 60/124,655
10
11
     <151> EARLIER FILING DATE: 1999-03-16
     <160> NUMBER OF SEQ ID NOS: 16
13
     <170> SOFTWARE: PERL Program
14
     <210> SEO ID NO 1
     <211> LENGTH: 213
15
     <212> TYPE: PRT
16
17
     <213> ORGANISM: Homo sapiens
18
     <220> FEATURE:
19
     <221> NAME/KEY: misc feature
20
     <223> OTHER INFORMATION: Incyte ID No: 1676225CD1
21
     <400> SEQUENCE: 1
22
           Met Ala Val Leu Ser Ala Pro Gly Leu Arg Gly Phe Arg Ile Leu
23
           Gly Leu Arg Ser Ser Val Gly Pro Ala Val Gln Ala Arg Gly Val
24
25
                             20
           His Gln Ser Val Ala Thr Asp Gly Pro Ser Ser Thr Gln Pro Ala
26
27
                                                 40
28
           Leu Pro Lys Ala Arg Ala Val Ala Pro Lys Pro Ser Ser Arg Gly
29
                             50
                                                 55
           Glu Tyr Val Val Ala Lys Leu Asp Asp Leu Val Asn Trp Ala Arg
30
31
                                                 70
           Arg Ser Ser Leu Trp Pro Met Thr Phe Gly Leu Ala Cys Cys Ala
32
33
                            80
34
           Val Glu Met Met His Met Ala Ala Pro Arg Tyr Asp Met Asp Arg
35
                                                100
36
           Phe Gly Val Val Phe Arg Ala Ser Pro Arg Gln Ser Asp Val Met
37
                                                115
           Ile Val Ala Gly Thr Leu Thr Asn Lys Met Ala Pro Ala Leu Arg
38
39
                           125
                                                130
40
           Lys Val Tyr Asp Gln Met Pro Glu Pro Arg Tyr Val Val Ser Met
41
                           140
                                                145
42
           Gly Ser Cys Ala Asn Gly Gly Gly Tyr Tyr His Tyr Ser Tyr Ser
43
                                                160
           Val Val Arg Gly Cys Asp Arg Ile Val Pro Val Asp Ile Tyr Ile
44
```

PAGE: 2 RAW SEQUENCE LISTING DATE: 04/03/2000 TIME: 11:06:42

PATENT APPLICATION US/09/525,867

Input Set: I525867.RAW

| 45 | | | | _ | | 170 | | | | | 175 | | | | | 180 |
|----|-------|---|------|------|-----|------|-----|-----|------------|--------|-------|---------|-------|--------|-------------|------------|
| 46 | | Pro | Gly | Cys | Pro | | | Ala | Glu | ı Ala | Let | Let | ι Туг | : Gly | / Ile | e Leu |
| 47 | | _ | | | | 185 | | | | | 190 | | | | | 195 |
| 48 | | Gln | Leu | Gln | Arg | Lys | Ile | Lys | Arg | , Glu | ı Arg | Arg | Lev | ı Glr | ı Ile | Trp |
| 49 | | | | | | 200 | H | | | | 205 | ; | | | | 210 |
| 50 | | _ | Arg | _ | | | | | | | | | | | | |
| 51 | <210> | SEQ | ID | NO 2 | | | | | | | | | | | | |
| 52 | <211> | LEN | GTH: | 303 | | | | | | | | | | | | |
| 53 | <212> | TYP | E: P | RT | | | | | | | | | | | | |
| 54 | <213> | ORG | ANIS | M: H | omo | sapi | ens | | | | | | | | | |
| 55 | <220> | FEA | TURE | : | | | | | | | | | | | | |
| 56 | <221> | NAME/KEY: misc_feature | | | | | | | | | | | | | | |
| 57 | <223> | OTHER INFORMATION: Incyte ID No: 2057235CD1 | | | | | | | | | | | | | | |
| 58 | | SEQUENCE: 2 | | | | | | | | | | | | | | |
| 59 | | Met | Ala | Asp | Ala | Ala | Ser | Gln | Val | Leu | Leu | Glv | Ser | Glv | Len | Thr |
| 60 | | 1 | | | | 5 | | | | | 10 | | | 4 | | 15 |
| 61 | | Ile | Leu | Ser | Gln | Pro | Leu | Met | Tyr | Val | Lvs | Val | Leu | Ile | Gln | Val |
| 62 | | | | | | 20 | | | | | 25 | | | | 011 | 30 |
| 63 | | Gly | Tyr | Glu | Pro | Leu | Pro | Pro | Thr | Ile | | Ara | Asn | Tle | Phe | Gly |
| 64 | | _ | - | | | 35 | | | | | 40 | 3 | | | | 45 |
| 65 | | Arg | Gln | Val | Cys | Gln | Leu | Pro | Glv | Leu | | Ser | Tur | Δla | G]n | His |
| 66 | | _ | | | • | 50 | | | 1 | | 55 | 501 | - 7 - | niu | GII | 60 |
| 67 | | Ile | Ala | Ser | Ile | | Glv | Ara | Ara | Glv | | Phe | Thr | G1v | T.011 | Thr |
| 68 | | | | | | 65 | | 5 | 3 | 1 | 70 | | | CLY | Leu | 75 |
| 69 | | Pro | Arq | Leu | Cvs | | Glv | Val | Leu | Glv | | Val | Va 1 | Hie | Gly | Lys |
| 70 | | | _ | | • | 80 | 2 | | | 1 | 85 | • • • • | ·uı | 1113 | GLY | 90 |
| 71 | | Val | Leu | Gln | His | | Gln | Glu | Ser | Asp | | Glv | Glu | Glu | T.011 | Gly |
| 72 | | | | | | 95 | | | | | 100 | 0-7 | Oru | Giu | шец | 105 |
| 73 | | Pro | Gly | Asn | Val | | Lvs | Glu | Val | Ser | | Ser | Dhe | λen | uic | |
| 74 | | | • | | | 110 | -1- | | | | 115 | 501 | 1110 | Asp | 1115 | 120 |
| 75 | | Ile | Lys | Glu | Thr | | Ara | Glu | Met | Tle | | Δνα | Sar | Δ] a | λla | |
| 76 | | | • | | | 125 | 5 | | | | 130 | 9 | DCI | AIG | AIG | 135 |
| 77 | | Leu | Ile | Thr | His | | Phe | His | Val | Tle | | T.e.11 | Δνα | Ser | Mot | 133 |
| 78 | | | | | | 140 | | | | | 145 | Deu | AT 9 | Ber | Mec | 150 |
| 79 | | Gln | Phe | Ile | Glv | | Glu | Ser | Lvs | Tyr | | Glv | T.611 | Cve | Λαn | 200 |
| 80 | | | | | 1 | 155 | | | _, | -1- | 160 | GLY | пси | Cys | Asp | 165 |
| 81 | | Ile | Ile | Thr | Ile | | Ara | Glu | Glu | Glv | | T.011 | Glv. | Dhe | Dho | |
| 82 | | | | | | 170 | 3 | | | 017 | 175 | LCu | GLY | rne | FIIC | |
| 83 | | Glv | Leu | Val | Pro | | Len | Len | Glv | Δen | | T.au | Car | Lou | Two | 180 |
| 84 | | • | | | | 185 | | | - 1 | пор | 190 | шец | Der | Deu | ııp | |
| 85 | | Cvs | Asn | Ser | Leu | | Tvr | Leu | Val | Δsn | | Туг | λla | T.011 | λαπ | 195 |
| 86 | | • | | | | 200 | -1- | | · · · · | 71,511 | 205 | 1 7 1 | ліа | пец | Asp | |
| 87 | | Glv | Val | Ser | Thr | | Δsn | Glu | Met | Lve | | ጥረም | Cor | Cln | ח ה | 210 |
| 88 | | - 4 | | | | 215 | | | | -10 | 220 | - y - | Der | GIII | TTC | |
| 89 | | Thr | Gly | Phe | Phe | | Ser | Met | Len | Thr | | Dro | Dha | 17 - 1 | Len | 225 |
| 90 | | - | 4 | | | 230 | ~~~ | | | | 235 | | ₹ 11€ | val | ⊿ eu | |
| 91 | | Ser | Asn | Leu | | | Val | Agn | Δen | Cve | | T.e.v | 71 ~ | G1 | C1 | 240 |
| 92 | | | | | | 245 | | | | -75 | 250 | Leu | пта | GIY | GTA | |
| 93 | | Pro | Pro | Tvr | Ser | | Ile | Tvr | Thr | Ser | | Tlo | λαν | Cvc | Т | 255 Cvc |
| 94 | | - | - | | | 260 | | -1- | | | 265 | -+C | עטט | Cys | тър | |
| | | | | | | | | | | | | | | | | 270 |

PAGE: 3 RAW SEQUENCE LISTING DATE: 04/03/2000 TIME: 11:06:42

PATENT APPLICATION US/09/525,867

Input Set: I525867.RAW

| 95 96 | | Met | : Let | ı Glı | Ly: | | | / As | n Met | t Se | | | y Ası | ı Se | r Le | u Phe |
|------------|-------|---|-------|--------|------------|--------------|--------|------------|-------|-------|------------|-------|------------|-------------|----------|------------|
| 97 | | Phe | Δ Τ Γ | T.326 | . Va | 275 זות ו | _ | . (1) | . T | ~ mb. | 280 | | | | _ | 285 |
| 98 | | 1110 | . Alg | , Llys | va. | 290 | | : GI | у гу | s Tn | | | s Cys | S Ası | p Le | Lys |
| 99 | | Met | : Leu | Tle | . | 2)(| , | | | | 29 | • | | | | 300 |
| 100 | <210> | | | | | | | | | | | | | | | |
| 101 | <211> | | | | | | | | | | | | | | | |
| 102 | <212> | | | | - | | | | | | | | | | | |
| 103 | <213> | | | | Iomo | sapi | ens | | | | | | | | | |
| 104 | <220> | | | | | _ | | | | | | | | | | |
| 105 | <221> | NAM | E/KE | Υ: π | nisc | feat | ure | | | | | | | | | |
| 106 | | OTHER INFORMATION: Incyte ID No: 2186363CD1 | | | | | | | | | | | | | | |
| 107 | <400> | SEQUENCE: 3 | | | | | | | | | | | | | | |
| 108 | | Met | Pro | Leu | Lys | Gln | Met | Met | Туг | Pro | Gly | v Val | . Ala | Glr | . Sei | lle |
| 109 | | 1 | | | | 5 | ; | | | | 10 |) | | | | 15 |
| 110 | | Asn | Ser | Asp | Val | Asn | Asn | Leu | Met | : Ala | ı Val | Leu | Asn | Met | Ser | Asn |
| 111 | , | • | | | | 20 |) | | | | 25 | ; | | | | 30 |
| 112 | | Met | Leu | Pro | Glu | Gly | Leu | Phe | Pro | Glu | ı His | Leu | Ile | Asp | Val | . Leu |
| 113 | | | _ | | | 35 | | | | | 40 | | | | | 45 |
| 114 | | Arg | Arg | Glu | Leu | | | Glu | Cys | Asp | Tyr | Gln | Arg | Glu | Ala | Ala |
| 115 | | C | | | _ | 50 | | _ | | | 55 | | | | | 60 |
| 116 | | Cys | Ата | Arg | ьуs | | | Asp | Leu | Leu | | | His | Pro | Phe | Phe |
| 117 118 | | Фт гъ | 77-1 | Dwo | a 1 | 65 | | | ~ 3 | _ | 70 | | | | | 75 |
| 119 | | TAT | vaı | PIO | GIU | | vaı | Asp | GIu | . Leu | | Ser | Pro | His | Val | Leu |
| 120 | | Thr | Thr | Glu | T.011 | 08 1=17 | cor | C1. | Dho | D | 85 | • | ~ 3 | | | 90 |
| 121 | | **** | 1111 | Giu | пеп | 95 | ser | GIY | Pne | Pro | | Asp | GIn | Ala | GIu | Gly |
| 122 | | Leu | Ser | Gln | Glu | | Δra | Δen | Glu | Tla | 100 | Ф. т. | * ~ ~ | * 7_ | T | 105 Val |
| 123 | | | 201 | | 014 | 110 | nr 9 | Hall | Giu | 116 | 115 | TYL | ASI | тте | ьeu | |
| 124 | | Leu | Cys | Leu | Arg | - | Leu | Phe | Glu | Phe | | Phe | Met | G1n | Thr | 120 Asp |
| 125 | | | • | | , | 125 | | | | | 130 | 1110 | ricc | GIII | 1111 | 135 |
| 126 | | Pro | Asn | Trp | Ser | Asn | Phe | Phe | Tyr | Asp | | Gln | Gln | His | Lvs | Val |
| 127 | | | | | | 140 | | | - | • | 145 | | | | -,, - | 150 |
| 128 | | Ala | Leu | Leu | Asp | Phe | Gly | Ala | Thr | Arg | Glu | Tyr | Asp | Arq | Ser | Phe |
| 129 | | | | | | 155 | | | | | 160 | | | | | 165 |
| 130 | • | Thr | Asp | Leu | Tyr | Ile | Gln | Ile | Ile | Arg | Ala | Ala | Ala | Asp | Arg | Asp |
| 131 | | | | | | 170 | | | | | 175 | | | | | 180 |
| 132 | 1 | Arg | Glu | Thr | Val | Arg | Ala | Lys | Ser | Ile | Glu | Met | Lys | Phe | Leu | Thr |
| 133 | | | | _ | | 185 | | | | | 190 | | | | | 195 |
| 134 | (| Gly | Tyr | Glu | Val | | Val | Met | Glu | Asp | Ala | His | Leu | Asp | Ala | Ile |
| 135 | | . | -1- | | | 200 | | | _ | | 205 | | | | | 210 |
| 136 137 | | Leu | тте | ьeu | GTA | | Ala | Phe | Ala | Ser | Asp | Glu | Pro | Phe | Asp | |
| 137 | , | 21., | Th∽ | C1 ~ | g | 215 | m\r | 01 | • - | | 220 | _ | _ | | | 225 |
| 139 | • | - - y | 1111 | GIII | oe1 | | THE | GIU | гуѕ | тте | His | Asn | Leu | Ile | Pro | |
| 140 | ħ | viet | I.e. | Δτα | Hie | 230 | T.e.11 | 17:a 1 | Dro | Dro | 235 | α1 | ~ 1 | m\ | | 240 |
| 141 | • | | u | · 14 9 | **** | 245 | eu | val | LIO | Pro | Pro 250 | GIU | GIU | rnr | Tyr | |
| 142 | I | Leu | His | Ara | Lvs | | Glv | Glv | Ser | Dha | Leu | T1^ | Cara | Co | T | 255 |
| 143 | _ | | | 3 | _, . | 260 | OLY | U-y | PET | FIIC | 265 | TTE | cys | ser | ьys | |
| 144 | I | Lys | Ala | Arq | Phe | | Cvs | Lvs | Ala | Met | Phe | Glu | Gl: | Δla | መረ ነው | 270 |
| | | • | | , | | | -1- | _, _ | | | T 11C | JIU | JIU | пта | TAT | Ser |

PAGE: 4 RAW SEQUENCE LISTING DATE: 04/03/2000 PATENT APPLICATION US/09/525,867 TIME: 11:06:42

Input Set: I525867.RAW

Asn Tyr Cys Lys Arg Gln Ala Gln Gln <210> SEQ ID NO 4 <211> LENGTH: 179 <212> TYPE: PRT <213> ORGANISM: Homo sapiens <220> FEATURE: <221> NAME/KEY: misc_feature <223> OTHER INFORMATION: Incyte ID No: 3126833CD1 <400> SEQUENCE: 4 Met Ser Gly Gly Arg Ala Pro Ala Val Leu Leu Gly Gly Val Ala Ser Leu Leu Ser Phe Val Trp Met Pro Ala Leu Leu Pro Val Ala Ser Arg Leu Leu Leu Pro Arg Val Leu Leu Thr Met Ala Ser Gly Ser Pro Pro Thr Gln Pro Ser Pro Ala Ser Asp Ser Gly Ser Gly Tyr Val Pro Gly Ser Val Ser Ala Ala Phe Val Thr Cys Pro Asn Glu Lys Val Ala Lys Glu Ile Ala Arg Ala Val Val Glu Lys Arg Leu Ala Ala Cys Val Asn Leu Ile Pro Gln Ile Thr Ser Ile Tyr Glu Trp Lys Gly Lys Ile Glu Glu Asp Ser Glu Val Leu Met Met Ile Lys Thr Gln Ser Ser Leu Val Pro Ala Leu Thr Asp Phe Val Arg Ser Val His Pro Tyr Glu Val Ala Glu Val Ile Ala Leu Pro Val Glu Gln Gly Asn Phe Pro Tyr Leu Gln Trp Val Arg Gln Val Thr Glu Ser Val Ser Asp Ser Ile Thr Val Leu Pro <210> SEQ ID NO 5 <211> LENGTH: 314 <212> TYPE: PRT <213> ORGANISM: Homo sapiens <220> FEATURE: <221> NAME/KEY: misc feature <223> OTHER INFORMATION: Incyte ID No: 3446038CD1 <400> SEQUENCE: 5 Met Glu Asp Lys Arg Asn Ile Gln Ile Ile Glu Trp Glu His Leu Asp Lys Lys Phe Tyr Val Phe Gly Val Ala Met Thr Met Met Ile Arg Val Ser Val Tyr Pro Phe Thr Leu Ile Arg Thr Arg Leu Gln Val Gln Lys Gly Lys Ser Leu Tyr His Gly Thr Phe Asp Ala

PAGE: 5 RAW SEQUENCE LISTING DATE: 04/03/2000

PATENT APPLICATION US/09/525,867 TIME: 11:06:42

Input Set: I525867.RAW

| 195 | | | | | | 50 | | | | | 55 | | | | | 60 |
|------------|------------|-------|----------------|----------|--------------|------|--------|------|------|------------------|-------|-------------|---------|-----|------------|------------|
| 196 | | Phe | Ile | Lys | Ile | Leu | Arg | Ala | Asp | Gly | Ile | Thr | Gly | Leu | Tyr | Arg |
| 197 | | | | | | 65 | | | | _ | 70 | | _ | | - | 75 |
| 198 | | Gly | Phe | Leu | Val | Asn | Thr | Phe | Thr | Leu | Ile | Ser | Gly | Gln | Cys | Tyr |
| 199 | | | | | | 80 | | | | | 85 | | | | _ | 90 |
| 200 | | Val | Thr | Thr | Tyr | Glu | Leu | Thr | Arg | Lys | Phe | Val | Ala | Asp | Tyr | Ser |
| 201 | | | | | | 95 | | | | | 100 | | | | | 105 |
| 202 | | Gln | Ser | Asn | Thr | Val | Lys | Ser | Leu | Val | Ala | Gly | Gly | Ser | Ala | Ser |
| 203 | | | | | | 110 | | | | | 115 | | | | | 120 |
| 204 | | Leu | Val | Ala | Gln | Ser | Ile | Thr | Val | Pro | Ile | Asp | Val | Val | Ser | ${	t Gln}$ |
| 205 | | | | | | 125 | | | | | 130 | | | | | 135 |
| 206 | | His | Leu | Met | Met | | Arg | Lys | Gly | Glu | | Met | Gly | Arg | Phe | Gln |
| 207 | | ••- 7 | _ | ~3 | _ | 140 | | | | | 145 | _ | _ | _ | _ | 150 |
| 208 | | vaı | Arg | GIY | Asn | | GIu | GIY | Gln | Gly | | Val | Ala | Phe | Gly | |
| 209 | | mb | T | 3 | - 1 - | 155 | • | ~7 | | _ | 160 | | _ | | _ | 165 |
| 210 | | Thr | ьys | Asp | тте | | Arg | GIn | IIe | Leu | | Ala | Asp | Gly | Leu | - |
| 211 212 | | C1., | Dho | The ease | 7 | 170 | | 77-7 | 21- | ~ | 175 | . | m1 | _ | | 180 |
| 213 | | GIY | FILE | ıyı | ALG | 185 | ıyı | Val | Ala | ser | | Leu | Thr | Tyr | тте | |
| 214 | | Δen | Ser | Δla | 17 a 1 | | Trans. | Dro | Dho | Тиг | 190 | Dho | TT2 =20 | Ala | ~1 | 195 |
| 215 | | -1011 | 501 | nia | Val | 200 | 115 | FIO | FIIC | ıyı | 205 | FIIE | TAT | Ата | GIU | 210 |
| 216 | | Leu | Ser | Tvr | Leu | | Pro | Lvs | Glu | Cvs | | ніс | Tle | Val | Dha | |
| 217 | | | | -1- | | 215 | | _,, | | C ₁ C | 220 | | 110 | vai | rne | 225 |
| 218 | | Ala | Val | Ser | Gly | | Leu | Ala | Ala | Ala | | Ala | Ser | Ile | Leu | |
| 219 | | | | | - | 230 | | | | | 235 | | | | | 240 |
| 220 | | Asn | Pro | Met | Asp | Val | Ile | Arg | Thr | Arg | Val | Gln | Val | Glu | Gly | |
| 221 | | | | | | 245 | | | | | 250 | | | | - | 255 |
| 222 | | Asn | Ser | Ile | Ile | Leu | Thr | Phe | Arg | Gln | Leu | Met | Ala | Glu | Glu | Gly |
| 223 | | | | | | 260 | | | | | 265 | | | | | 270 |
| 224 | | Pro | \mathtt{Trp} | Gly | Leu | Met | Lys | Gly | Leu | Ser | Ala | Arg | Ile | Ile | Ser | Ala |
| 225 | | | | | | 275 | | | | | 280 | | | | | 285 |
| 226 | | Thr | Pro | Ser | Thr | | Val | Ile | Val | Val | Gly | Tyr | Glu | Ser | Leu | Lys |
| 227 | | _ | _ | _ | _ | 290 | | _ | | | 295 | | | | | 300 |
| 228 | | Lys | Leu | Ser | Leu | | Pro | Glu | Leu | Val | | Ser | Arg | His | Trp | |
| 229 | .010. | ano. | TD . | | | 305 | | | | | 310 | | | | | |
| 230 231 | <210><211> | _ | | | | | | | | | | | | | | |
| 232 | <211> | | | | | | | | | | | | | | | |
| 232 | <213> | | | | .mo e | anie | n c | | | | | | | | | |
| 234 | <220> | | | | niio s | apre | :115 | | | | | | | | | |
| 235 | <221> | | | | sc f | eati | re | | | | | | | | | |
| 236 | <223> | | | | _ | | | e TI | No. | 411 | 3161 | CD1 | | | | |
| 237 | <400> | | | | | | | | | **** | .5101 | CDI | | | | |
| 238 | | | | | Lys | Val | Glv | Glv | Leu | Leu | Ara | G] v | Thr | Gly | Glv | Gln |
| 239 | | 1 | - | | • | 5 | 2 | 1 | | | 10 | U -1 | | 0-7 | - 1 | 15 |
| 240 | | Leu | Gly | Gln | Thr | Val | Gly | Trp | Pro | Cys | | Ala | Leu | Gly | Pro | |
| 241 | | | - | | | 20 | • | • | | - | 25 | _ | | 1 | | 30 |
| 242 | | Pro | His | Arg | Trp | Gly | Pro | Cys | Gly | Gly | Ser | Trp | Ala | Gln | Lys | |
| 243 | | | | | | 35 | | | | | 40 | | | | | 45 |
| 244 | | Tyr | Gln | Asp | Gly | Pro | Gly | Arg | Gly | Leu | Gly | Glu | Glu | Asp | Ile | Arg |
| | | | | | | | | | | | | | | | | |

PAGE: 6

VERIFICATION SUMMARY
PATENT APPLICATION US/09/525,867

DATE: 04/03/2000

TIME: 11:06:42

Input Set: I525867.RAW

Line ? Error/Warning

Original Text